



DECLARATION OF YASUMICHI HITOSHI UNDER 37 C.F.R. §1.131	Application Number	09/843,159
	Confirmation Number	8575
	Filing Date	April 25, 2001
	First Named Inventor	Ying Luo
	Examiner	Manjunath Rao
	Group Art	1652
	Attorney Docket No.	RIGL-010CIP2

This Declaration with the attached Exhibits are being submitted in conjunction with the Applicants' Response to the Office Action dated May 26, 2004.

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I, Yasumich Hitoshi, M.D. Ph.D., do hereby declare as follows.

1. I am currently a program director at Rigel Pharmaceuticals, Inc. (hereinafter "Rigel"), and the work described in the above-referenced patent application was performed with my knowledge.
2. I understand that the claimed subject matter of the above-referenced patent application relates to assays for identifying agents that modulate the poly(A) ribose polymerase activity of Tankyrase H.
3. I have been asked to provide factual evidence relating to the activities of Rigel and Rigel's patent counsel with respect to the claimed subject matter, prior to October 25, 1999 (the filing date of the above-referenced patent application).

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4. I have reviewed the Exhibits attached hereto and they all relate to the activities of Rigel or Rigel's patent counsel with respect the claimed subject matter, prior to October 25, 1999.
5. Prior to June 11, 1999, the inventors of the above-referenced patent application identified the sequence of the ADP-ribose polymerase domain of Tankyrase H and identified that Tankyrase H had poly(A) ribose polymerase activity. Evidence for this is provided in Exhibit A. All redacted dates are prior to June 11, 1999.
6. Further, between June 11, 1999, and July 21 1999, the inventors worked towards identifying the full length sequence of Tankyrase H for use in the above-referenced screening assays. Evidence for this is provided in Exhibits B and C. The dates have not been redacted in these exhibits.
7. Finally, between July 20, 1999 and October 25, 1999, the above-referenced patent application was drafted at the law firm of Flehr, Hobach, Test, Albritton and Herbert (hereinafter "Flehr"), the law firm contracted to draft the above-referenced patent application. Evidence for this is provided in Exhibits D – H. The dates have not been redacted in these exhibits.
8. Exhibit A consists of a print-out of Tankyrase H amino acid and nucleic acid sequences. On pages, 2, 6 and 7 of this Exhibit, Tankyrase H is identified as having a poly(A) ribose polymerase domain. The date of the print-out was prior to June 11, 1999.
9. Exhibit B consists of a presentation that was made by Xiang Xu, an inventor, that identifies Tankyrase H as having poly(A) ribose polymerase activity on page 3. The date of this presentation was June 15, 1999.
10. Exhibit C consists of signed laboratory notebook pages from Simon Yu, a colleague at Rigel Pharmaceuticals, Inc. These notebook pages show results of experiments directed towards identifying the full length sequence of Tankyrase H for use in the above-


referenced screening assays. The notebook pages are dated July 9, July 13, July 15, July 16 and July 21, 1999, respectively.

11. Exhibit D consists of a letter from Nicole Verona of Rigel to Ms. Robin Silva of Flehr), the law firm contracted to draft the above-referenced patent application. The letter references an invention disclosure (i.e., eight packages of information) for use in preparation of the above-referenced patent application. The date of the letter is July 20, 1999.
12. Exhibit E consists of a letter from Nicole Verona of Rigel to Ms. Robin Silva of Flehr. The letter references diskettes for use in preparation of the above-referenced patent application. The date of the letter is July 22, 1999.
13. Exhibit F consists of a file information page from Flehr, indicating that the file for the above-referenced patent application was opened on July 26, 2003.
14. Exhibit G consists of an e-mail dated August 30, 1999, from Nicole Verona of Rigel to Ms. Dolly Vance of Flehr regarding questions about the above referenced invention disclosure. The body of this e-mail contains text of previous e-mails dated August 20, 1999 and August 26, 1999, also relating to the above referenced invention disclosure.
15. Exhibit H consists of a letter from Nicole Verona of Rigel to Ms. Dolly Vance regarding further documents for use in drafting the above-referenced patent application. The date of the letter is September 30, 1999.
16. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18

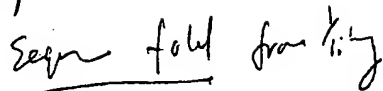
of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Respectfully submitted,

Date: 9/3/04


Yasumichi Hitoshi, M.D. Ph.D.,

Attachments: Exhibits A - G



1 GAAGTGCAGCGGGTGGATTTCCTGGAATTGCCTTAGTAGTAGTACCACCCAAGGCACGTG
61 CTTAGGTACCACTGCTGCTTAGTGGAGAGTCCCTCTGGCTTTATCATTAAAGGTTTTGGGC
121 GGAAAGACGTAGTTGAATATTTGCTTCAGAATGGTGCAAAATGTCCAAGCAGCTGATGATG
181 GGGGCCCTTATTCCTCTTCATAATGCATGCTCTTTTGGTCATGCTGAAGTAGTCAATCTCC
241 TTTTGGCAGATGGTGCAGACCCCAATGCTCGAGATAATTGGAATTATACTCCTCTCCATG
301 AAGCTGCAATTAAAGGAAAGATTGATGTTTGCATTGTGTTGCTATTTTGCACTGCTGTTA
361 CAGCATGGAGCTGAGCCAACCATCTAAATACAGATGGAAGGACAGCATTGGATTTAGCA
421 GATCCATCTGCCAAAGCAGTGCCTTACTGGTGAATATAGAAAGATGAACCTCTTAGAAAGT
481 GCCAGGAGTGGCAATGAAGAAAAAATGATGGCTCTACTCACACCATTAAATGTCAACTGC
541 CACGCAAGTGATGGCAGAAAGTCAACTCCATTACATTTGGCAGCAGGATATAACAGAGTA
601 AAGATTGTACAGCTGTTACTGCAACATGGAGCTGATGTCCATGCTAAAGATAAAGGTGAT
661 CTGGTACCATTACACAATGCCTGTTCTTATGGTCATTATGAAGTAACTGAACTTTTGGTC
721 AAGCATGGTGCCTGTGTTAAATGCAATGGACTTGTGGCAATTCCTCCTCTTCATGAGGCA
781 GCTCTTAAGAACAGGTTGTGAAGTAGTGTCTCTCTCTTAAGTTATGGTGCAGACCCAACA
841 CTGCTCAATTGTGCACAATAAAGTGCTATAGACTTGGCTCCCAAGCTGAGTGTAAAGAA
901 AGATTAGCATATGAATTTAAAGGCCACTTGTGCTGCAGCTGCACGAGAAGCTGATGTT
961 ACTCGAATCAAAAAACATCTCTCTCTGGAATGGTGAATTTCAAGCATCTCTCAAAACAT
1021 GAAACAGCATTGCATTGTGCTGCTGCATCTCCATATCCCAAAAGAAAGCAAATATGTGAA
1081 CTGTTGCTAAGAAAAGGAGCAAAACATCAATGAAAAGACTAAAGAATCTTGACTCCTCTG
1141 CACGTGGCATCTGAGAAAGCTCATAATGATGTTGTTGAAGTAGTGGTGAACATGAAGCA
1201 AAGGTTAATGCTCTGGATAATCTTGGTCAGACTTCTCTACACAGAGCTGCATATTTGTTG
1261 CATCTACAAACCTGCCGCCCTACTCCTGAGCTATGGGTGTGATCCTAACATTATATCCCTT
1321 CAGGGCTTTACTGCTTTACAGATGGGAAATGAAAATGTACAGCAACTCCTCCAAGAGGGT
1381 ATCTCATTAGGTAATTCAGAGGCAGACAGACAATTGCTGGAAGCTGCAAAGGCTGAGAT
1441 GTCGAACTGTAAAAAACTGTGTACTGTTTACAGAGTGTCAACTGCAGAGACATTGAAGGG
1501 CGTCAGTCTACACCACTTCATTTTGCAGCTGGGTATAACAGAGTGTCCGTGGTGGAAATAT
1561 CTGCTACAGCATGGAGCTGATGTGCATGCTAAAGATAAAGGAGGCCCTTGTAACCTTTGCAC
1621 AATGCATGTTCTTATGGACATTATGAAGTTGCAGAACTTCTTGTTAAACATGGAGCAGTA
1681 GTTAATGTAGCTGATTATGGAAATTTACACCTTTACATGAAGCAGCAGCAAAAGGAAAA
1741 TAGAAAATTTGCAAACTTCCTGCTCCAGCATGGTGACAGCCCTACCAAAAAAACAGGGAT
1801 GAAATACTCCTTTGGGATCTTGTTAAAGATGGAGATACAGATATTCATTATCTGCTTAGG
1861 GGAGATGCAGCTTTGCTAGATGCTGCCAAGAAGGGTTGTTATGCCAGAGTGAAGAAGTTG
1921 TCTTCTCCTGATAATGTAAATTTGCCGCCGATACCAAGGCAGACATTCAACACCTTTACAT

1981 TTAGCAGCTGGTTATAATAATTTAGAAGTTGCAGAGTATTTGTTACAACACGGAGCTGAT
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 2101 GTAGATGTAGCAGCTCTACTAATAAAGTATAATGCATGTGTCAATGCCACGGACAAATGG
 2161 GCTTTCACACCTTTGACGAAGCAGCCCAAAAGGGACGAACACAGCTTTGTGCTTTGTTG
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 2281 GTTTCAGCGGATGATGTCAGCGCTCTTCTGACAGCAGCCATGCCCCATCTGCTCTGCCC
 2341 TCTTGTACAGCCTCAAGTGCTCAATGGTGTGAGAAGCCAGGAGCCACTGCAGATGCT
 2401 CTCCTTCAGGTCCATCTAGCCCATCAAGCCTTTCTGCAGCCAGCAGTCTTGACAACTTA
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 2581 CTTGGACTTGAGCCTAATGGATATATTTGAGAGAGAACAGATCACTTTGGATGTATTA
 2641 GTTGAGATGGGACACAAGGAGCTGAAGGAGATTGGAATCAATGCTTATGGACATAGGCAC
 2701 AAATAATTAAGGAGTCGAGAGACTTATCTCCGGACAACAAGGCTTAACCCATATTTA
 2761 ACTTTGAACACCTCTGGTAGTGGAAACAATTCTTATAGATCTGTCTCCTGATGATAAGAG
 2821 TTTCACTCTGTGGAGGAAGAGATGCAAAGTACAGTTCGAGAGCACAGAGATGGAGGTCAT
 2881 GCAGGTGGAATCTTCAACAGATACAATATTCTCAAGATTCAGAAGGTTTGTAACAAGAAA
 2941 CTATGGGAAAGATACACTCACCAGGAGAAAAGAAGTTTCTGAAGAAAACCACAACCATGCC
 3001 AATGAACGAATGCTATTTCATGGGTCTCCTTTTGTGAATGCAATTATCCACAAAGGCTTT
 3061 GATGAAAGGCATGCGTACATAGGTGGTATGTTTGGAGCTGGCATTATTTTGTGAAAAC
 3121 TCTTCCAAAAGCAATCAATATGTATATGGAATTGGAGGAGTACTGGGTGTCCAGTTCAC
 3181 AAAGACAGATCTTGTTACATTGGCCACAGGCAGCTGCTCTTTTGGCGGTAACCTTGGGA
 3241 AAGTCTTTCTGCAGTTCAGTGCAATGAAAATGGCACATTCTCTCCAGGTCACTACTCA
 3301 GTCAGTGGTAGGCCAGTGTAATGGCCTAGCATTAGCTGAATATGTTATTTACAGAGGA
 3361 GAACAGGCTTATCCTGAGTATTTAATTACTTACCAGATTATGAGGCTGAAGGTATGGTC
 3421 GATGGATAAATAGTTATTTTAAGAACTAATTCCTACTGACCTAAATCATCAAAGCAGC
 3481 AGTGGCCTCTACGTTTTACTCCTTTGCTGAAAAAAAAA

ref|NP_003738.1|PTNKS| TANKYRASE >gi|3929219 (AF082556) TRF1-interacting
 ankyrin-related

ADP-ribose polymerase [Homo sapiens] Length = 1327
 Score = 1640 bits (4199), Expect = 0.0
 Identities = 790/1023 (77%), Positives = 871/1023 (84%), Gaps = 11/1023 (1%)
 Query: 35 VLLQHGAEPTILNTDGRALDLADPSAKAVLTGEYKKDELLESARSGNEEKMMALLTPLN 94
 VLLQHGAP I NTDG++ALDLADPSAKAVLTGEYKKDELLE+ARSGNEEK+MALLTPLN
 Sbjct: 300 VLLQHGADPNIRNTDGKSALDLADPSAKAVLTGEYKKDELLEAARSGNEEKLMAALLTPLN 359
 Query: 95 VNCHASDGRKSTPLHLAAGYNRVKIVQLLLQHGADVHAKDKGDLVPLHNACSYGHYEVE 154
 VNCHASDGRKSTPLHLAAGYNRV+IVQLLLQHGADVHAKDKG LVPLHNACSYGHYEVE
 Sbjct: 360 VNCHASDGRKSTPLHLAAGYNRVRIVQLLLQHGADVHAKDKGGLVPLHNACSYGHYEVE 419
 Query: 155 LLVKHGACVNAMDLWQFTPLHEAASKNRVEVCSLLSYGADPTLLNCHNKSALDLAPTQ 214
 LL+KHGACVNAMDLWQFTPLHEAASKNRVEVCSLLS+GADPTL+NCH KSA+D+APTP+
 Sbjct: 420 LLLKHGACVNAMDLWQFTPLHEAASKNRVEVCSLLSHGADPTLVNCHGKSAVDMAPTPE 479
 Query: 215 LKERLAYEFKGHSLQAAREADVTRIKKHLSEMVNFKHPQTHETALHCAAASPYPKRKQ 274
 L+ERL YEFKGHSLQAAREAD++KK L+LE++NFK PQ+HETALHCA AS +PKRKQ
 Sbjct: 480 LRERLTYEFKGHSLQAAREADLAKVKKTLALEIINFKQPQSHETALHCAVASLHPKRKQ 539
 Query: 275 ICELLLRKGANINEKTKEFLTPLHVASXXXXXXXXXXXXXXXXXXXXLNLGQTSLHRAA 334
 + ELLLRKGAN+NEK K+F+TPLHVA+ LD LGQT+LHRAA
 Sbjct: 540 VTELLLRKGANVNEKNKDFMTPLHVAAERAHNDVMEVLHKHGAKMNALDTLGQTLHRAA 599
 Query: 335 YCGLQTCRLLLSYGCDPNIIISLQGFALQMGNEENVQQLLEGISLGNSEADRQLLEAAK 394
 GHLQTCRLLLSYG DP+IISLQGFAL QMGNE VQQ+L E + S+ D +LLEA+K
 Sbjct: 600 LAGHLQTCRLLLSYGSDPNIIISLQGFALQMGNEAVQQILSESTPIRTSDVDYRLLEASK 659

Query: 395 AGDVETVKKLCVQSVNCRDIEGRQSTPLHFAAGYNRVSVVEYLLQHGAADVHAKDKGGLV 454
 AGD+ETVK+LC+ Q+VNCRD+EGR STPLHFAAGYNRVSVVEYLL HGADVHAKDKGGLV
 Sbjct: 660 AGDLETVKQLCSSQNVNCRDLEGRHSTPLHFAAGYNRVSVVEYLLHHGADVHAKDKGGLV 719

Query: 455 PLHNACSYGHYEVAELLVKHGAVNVADLWKFTPLHEAAAKGKYEICKLLLQHGAADPTKK 514
 PLHNACSYGHYEVAELLV+HGA VNVADLWKFTPLHEAAAKGKYEICKLLL+HGADPTKK
 Sbjct: 720 PLHNACSYGHYEVAELLVRHGASVNVADLWKFTPLHEAAAKGKYEICKLLLKHGADPTKK 779

Query: 515 NRDGNTPLDLVKDGDTDIHYXXXXXXXXXXXXXXXXXXXXRVKLSPPDNVNCRDQTGRHST 574
 NRDGNTPLDLVK+GD TDI RV+KL +P+N+NCRDQTGR+ST
 Sbjct: 780 NRDGNTPLDLVKEGDTDIQDLLKGDAALLDAAKKGCLARVQKLCPTENINCRDQTGRNST 839

Query: 575 PLHLAAGYNNLEVAEYLLQHGAADVNAQDKGGLIPLHNAASYGHVDVAALLIKYNACVNAT 634
 PLHLAAGYNNLEVAEYLL+HGADVNAQDKGGLIPLHNAASYGHVD+AALLIKYN CVNAT
 Sbjct: 840 PLHLAAGYNNLEVAEYLLLEHGADVNAQDKGGLIPLHNAASYGHVDIAALLIKYNTCVNAT 899

Query: 635 DKWAFPTPLHEAAQKGRQTQLCALLLAHGADPTLKNQEGQTPLDLVSADDVSALLTAAMPPS 694
 DKWAFPTPLHEAAQKGRQTQLCALLLAHGADPT+KNQEGQTPLDL +ADD+ ALL AMPP
 Sbjct: 900 DKWAFPTPLHEAAQKGRQTQLCALLLAHGADPTMKNQEGQTPLDLATADDIRALLIDAMPPE 959

Query: 695 ALPSCYKPKQ---VLNGVRSFGATXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX 751
 ALP+C+KPKQ V + SP +T
 Sbjct: 960 ALPTCFKPKQATVVSASLISPAST-----PSCLSAASSIDNLTGPLAELAVGGASNAG 1011

Query: 752 XXXXXXXXXXXKEVPGVDFSITQFVRNLGLEHLMDIFEREQITLDVLVEMGHKELKEIGIN 811
 + EV G+D +I+QF+++LGLEHL DIFE EQITLDVL +MGH+ELKEIGIN
 Sbjct: 1012 DGAAGTERKEGEVAGLDMNISQFLKSLGLEHLRDIFETEQITLDVLADMGHEELKEIGIN 1071

Query: 812 AYGHRHKLIKVERLISGQGLNPYLTLNTSGSGTILIDLSPDDKEFQSVEEEMQSTVRE 871
 AYGHRHKLIKVERL+ GQQG NPYLT + GTIL+DL+P+DKE+QSVEEEMQST+RE
 Sbjct: 1072 AYGHRHKLIKVERLLGGQGTNPYLTFHCNVNQTILLDLAPEDKEYQSVEEEMQSTIRE 1131

Query: 872 HRDGGHAGGIFNRYNLIKQKVCNKKLWERYTHRRKEVSEENHNHANERMLFHGSPFFVNA 931
 HRDGG+AGGIFNRYN+++IQKV NKKL ER+ HR+KEVSEENHNH NERMLFHGSPFF+NA
 Sbjct: 1132 HRDGGNAGGIFNRYNVIRIQKVVNKKLRERFCHROKEVSEENHNHNERMLFHGSPFFINA 1191

Query: 932 IIHKGFDERHAYIGGMFGAGIYFAENSSKSNQVYVYGIGGGTGCPVHKDRSCYICHRQLLF 991
 IIHKGFDERHAYIGGMFGAGIYFAENSSKSNQVYVYGIGGGTGCP HKDRSCYICHRQ+LF
 Sbjct: 1192 IIHKGFDERHAYIGGMFGAGIYFAENSSKSNQVYVYGIGGGTGCPHDKDRSCYICHRQMLF 1251

Query: 992 CRVTLGKSFLQFSAMKMAHSPPGHHSVTGRPSVNGLALAEYVIYRGEQAYPEYLITYQIM 1051
 CRVTLGKSFLQFS MKMAH+PPGHHSV GRPSVNGLA AEYVIYRGEQAYPEYLITYQIM
 Sbjct: 1252 CRVTLGKSFLQFSTMKMAHAPPGHHSVIGRPSVNGLAYAEYVIYRGEQAYPEYLITYQIM 1311

Query: 1052 RPE 1054
 +PE
 Sbjct: 1312 KPE 1314

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121 GCCAAAGCAGTGCCTTACTGGTGAATATAAGAAAGATGAACTCTTAGAAAGTGCCAGGAGT
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 1681 GGTTATAATAATTTAGAAGTGCAGAGTATTTGTTACAACACGGAGCTGATGTGAATGCC
 1741 CAAGACAAAGGAGGACTTATTCCTTTACATAATGCAGCATCTTACGGGCATGTAGATGTA
 1801 GCAGCTCTACTATAAAGTATAATGCATGTGTCAATGCCACGGACAAATGGGCTTTCACA
 1861 CCTTTGCACGAAGCAGCCCAAGGGACGAACACAGCTTTGTCTTTGTGCTAGCCCAT
 1921 GGAGCTGACCCGACTCTTAAAAATCAGGAAGGACAAACACCTTTAGATTAGTTTCAGCG
 1981 GATGATGTCAGCGCTCTTCTGACAGCAGCCATGCCCCATCTGCTCTGCCCTCTTGTAC
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 2221 AAAAGGAGGTTCCAGGAGTAGATTTTAGCATAACTCAATTCGTAAGGAATCTTGGACTT
 2281 GAGCACCTAATGGATATATTGAGAGAGAAGATCACTTTGGATGTATTAGTTGAGATG
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1 GGCACGAGCTGCAACGAAATGGAAAGATTGATGTTTTGCATTGTGTTTACAGCATGGA
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181 GGCAATGAAGAAAAATGATGGCTCTACTCACACCATTAAATGTCAACTGCCACGCAAGT
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 2161 TTTTCAGAACTGTCTTCAATAGTTAGTTCAAGTGAACAGAGGGTGCCTCCAGTTTGGAG
 2221 AAAAAGGAGGTTCCAGGAGTAGATTTTAGCATAAATCAATTCGTAAGGAATCTTGGACTT
 2281 GAGCACCTAATGGATATATTTGAGAGAGAACAGATCACTTTGGATGTATTAGTTGAGATG
 2341 GGGCACAAGGAGCTGAAGGAGATTGGAATCAATGCTTATGGACATAGGCACAACTAATT
 2401 AAAGGAGTCGAGAGACTTATCTCCGACAACAAGGTCTTAACCCATATTTAATTGAAC
 2461 ACCTCTGGTAGTGAACAATTTTATAGF5ATCTGTCTCCTGATGATAAAGAGTTTCAGTCTF6
 2521 GTGGAGGAAGAGATGCAAAGTACAGTTCGAGAGCACAGAGAF7TGGAGGTCATGCAGGTGGA
 2581 ATCTTCAACAGATACAATATTTCTCAAGATTGAGAAGGTTTGTAAACA

Plus

3'end

GTCTCCTGATGATAAAGAGTTTCAGTCTGTGGAGGAAGAGATGCAAAGT
 ACAGTTCGAGAGCACAGAGATGGAGGTCATGCAGGTGGAATCTTC
 AACAGATACAATATTTCAAGATTCAGAAGGTTTGTAACAAGAACTATGGGA
 AAGATACACTCACCGGAGAAAAGGTTTCTGAAGAAAACCACAACCATGCCAATGA
 ACGAATGCTATTTTCATGGGTCTCCTTTTGTGAATGCAATTATCCACAAAGGCTTTGATG
 AAAGGCATGCTACATAGGTGGTATGTTTGGAGCTGGCATTTATTTGCTGAAAACCTTT
 CCAAAAGCAATCAATATGTATATGGAATTGGAGGAGGTACTGGGTGTCCAGTTACAAAG
 ACAGATCTTGTACATTTGCCACAGGCAGCTGCTCTTTTGGCGGTAACCTTGGGAAAG
 TCTTTCCTGCAGTTCAAGTGAATGAAAATGGCACATTCTCTCCAGGTCATCACTCAGTC
 ACTGGTAGGCCAGTGTAATGGCCTAGCATTAGCTGAATATGTTATTTACAGAGGAGAA
 CAGGCTTATCTGAGTATTTAATTACTTACCAGATTATGAGGCCTGAAGGTATGGTCG
 ATGGATAAATAGTTATTTAAGAACTAATTCCTGAACTTAAATCATCAAAGCAGC
 AGTGGCCTCTACGTTTACTCCTTTGCTGAAAAA

gi|3929219 (AF082556) TRF1-interacting ankyrin-related ADP-ribose polymerase
[Homo sapiens] Length = 1327

Score = 464 bits (1181), Expect = e-130

Identities = 223/309 (72%), Positives = 249/309 (80%) Frame = +2

Query: 2 LEMVNFKHPQTHETALHCAAASPYPKRKQICELLRLKGANINEKTKEFLTPLHVASXXXX 181

LE++NFK PQ+HETALHCA AS +PKRKQ+ ELLLRKGAN+NEK K+F+TPLHVA+

Sbjct: 511 LEIINFKQPQSHETALHCAVASLHPKRKQVTELLLRKGANVNEKNKDFMTPLHVAAERAH 570

Query: 182 XXXXXXXXXXXXXXXXLDNLGQTSLHRAAYCGHLQTCRLLLSYGCDPNIIISLQGFTALQM 361

LD LGQT+LHRAA GHLQTCRLLLSYG DP+IISLQGFTA QM

Sbjct: 571 NDVMEVLHKHGAKMNALDTLGQTAALHRAALAGHLQTCRLLLSYGSDPSIISLQGFTAAQM 630

Query: 362 GNENVQQLQEGISLGNSEADRQLLEAAKAGDVETVKKLCTVQSVNCRDIEGRQSTPLHF 541

GNE VQQ+L E + S+ D +LLEA+KAGD+ETVK+LC+ Q+VNCRD+EGR STPLHF

Sbjct: 631 GNEAVQQILSESTPIRTSDVDYRLLEASKAGDLETVKQLCSSQNVNCRDLEGRHSTPLHF 690

Query: 542 AAGYNRVSVVEYLLQHGAADVHAKDKGGLVPLHNACSYGHEVAELLVKHGAVNVADLWK 721

AAGYNRVSVVEYLL HGADVHAKDKGGLVPLHNACSYGHEVAELLV+HGA VNVADLWK

Sbjct: 691 AAGYNRVSVVEYLLHHGADVHAKDKGGLVPLHNACSYGHEVAELLVRHGASVNVADLWK 750

Query: 722 FTPLHEAAAKGKYEICKLLLQHGAADPTKKNRDGNTPLDLVKDGDXTIQXXXXXXXXXXXXX 901

FTPLHEAAAKGKYEICKLLL+HGADPTKKNRDGNTPLDLVK+GDT IQ

Sbjct: 751 FTPLHEAAAKGKYEICKLLLKHGAADPTKKNRDGNTPLDLVKEGDTDIQDLLKGDAALLDA 810

Query: 902 XXKGCFXQI 928

KGC ++

Sbjct: 811 AKKGCCLARV 819

Longest ORF frame 2 of 310 amino acids

From amino acid position 1 to 311

1 LEMVNFKHPQTHETALHCAAASPYPKRKQICELLRLKGANINEKTKEFLTPLHVASEKAH

61 NDVVEVVVKHEAKVNALDNLGQTSLHRAAYCGHLQTCRLLLSYGCDPNIIISLQGFTALQM

121 GNENVQQLQEGISLGNSEADRQLLEAAKAGDVETVKKLCTVQSVNCRDIEGRQSTPLHF

181 AAGYNRVSVVEYLLQHGAADVHAKDKGGLVPLHNACSYGHEVAELLVKHGAVNVADLWK

241 FTPLHEAAAKGKYEICKLLLQHGAADPTKKNRDGNTPLDLVKDGDXTIQDLLRGDAXXLD

301 AXKGCFXQIX

1 GCTGGAATGGTGAATTTCAAGCATCTCTCAAAR7CACATGAAACAGCATTGCATTGTGCTGC

61 TGCATCTCCATATCCCAAAGAAAGCAAAR6TATGTGAACGTGTGCTAAGAAAAGGAGCAAA

121 R5CATCAATGAAAAGACTAAAGAATTCTTGACTCCTCTGCACGTGGCATCTGAGAAAGCTCA

181 TAATGATGTTGTTGAAGTAGTGGTGAAACATGAAGCAAAGGTTAATGCTCTGGATAATCT

241 TGGTCAGACTTCTCTACACAGAGCTGCATATTGTGGTCATCTACAAACCTGCCGCTACT

301 CCTGAGCTATGGGTGTGATCCTAACATTATATCCCTTCAGGGCTTTACTGCTTTACAGAT

361 GGGAAATGAAAATGTACAGCAACTCTCCAAGAGGGTATCTCATTAGTAATTCAGAGGC

421 AGACAGACAATGCTGGAAGCTGCAAAGGCTGGAGATGTCGAAACTGTAAAAAACTGTG

481 TACTGTTCAAGTGTCAACTGCAGAGACATTGAAGGGCGTCAGTCTACACCACCTTCATTT

541 TGCAGCTGGGTATAACAGAGTGTCCGTGGTGAATATCTGCTACAGCATGGAGCTGATGT

601 GCATGCTAAAGATAAAGGAGGCCTTGTACCTTTGCACAATGCATGTTCTTATGGACATTA

661 TGAAGTTGCAGAACTTCTTGTAAACATGGAGCAGTAGTTAATGTAGCTGATTTATGGAA

721 ATTTACACCTTTACATGAAGCAGCAGCAAAAGGAAAATATGAAATTTGCAAACCTTCGCT

781 CCAGCATGGTGCAGACCTTACCAAAAAAACAGGGATGGAAATACTCCTTTGGATCTTGT

841 TAAAGATGGAGATACANATATTCAAGATCTGCTTAGGGGAGATGCANNTTNTAGATGC

901 TGCCNANAAGGGTGTGTTTTANCCAGATTNAA

>EST assembled

Good protein homology to

gi|3929221 (AF082557) TRF1-interacting ankyrin-related
ADP-ribose polymerase [Homo sapiens]
TITLE Tankyrase, a poly(ADP-ribose) polymerase at human telomeres
JOURNAL Science 282, 1484-1487 (1998)
Longest ORF frame 3 of 258 amino acids
HVASEKAHNDVVEVVVKHEAKVNALDNLGQTSLHRAAXCGHLQTCRLLLSYGCDPNIISL
QGFTALQMGNENVQQLLEGISLGNSEADRLLEAAKAGDVETVKKLCTVQSVNCRDIEG
RQSTPLHFAAGYNRVSVVEYLLQHGADVHAKDKGGLVPLHNACSYGHYEVAELLVKHGAV
VNVADLWKFTPLHEAAAKGKYEICKLLQHGADPTKKNRDGNTPDLVKDGDXTXIQDLLR
GDAXXLDAAAXKGCFXQIX
TGCACGTGGCATCTGAGAAAGCTCATAATGATGTTGTTGAAGTAGTGGTGAAACATGAAG
R2CAAAGGTTAATGCTCTGGATAATCTTGGTCAGACTTCTCTACACAGAGCTGCATNTTGTG
GNCATCTACAAACCR1TGCCGCCTACTCTGAGCTATGGGTGTGATCCTAACATTATATCCC
TTCAGGGCTTTACTGCTTTACAGATGF4GGAAATGAAAATGTACAGCAACTCCTCCAAGAGG
GTATCTCATTAGGTAATTCAGAGGCAGACAGAR4CAATTGCTGGAAGCTGCAAAGGCTGGAG
ATGTCGAAACTGTAAAAAACTGTGTACTGTTR3CAGAGTGTCAACTGCAGAGACATTGAAG
GGCGTCAGTCTACACCACTTCATTTGTCAGCTGGGTATAACAGAGTGTCCGTGGTGAAT
ATCTGCTACAGCATGGAGCTGATGTGCATGCTAAAGATAAAGGAGGCCCTTGTTACCTTTGC
ACAAATGCATGTTCTTATGGACATTATGAAGTTGCAGAACTTCTTGTAAACATGGAGCAGF3
TAGTTAATGTAGCTGATTTATGGAATTTACACCTTTACATGAAGCAGCAGCAAAAGGAA
AATATGAAATTTGCAAACTTCTGCTCCAGCATGGTGF1CAGACCCTACCAAAAAAACAGGG
ATGGAAATACTCCTTTGGATCTTGTTAAAF2AGATGGAGATACANATATTCAAGATCTGCTTA
GGGAGATGCANNTTTNCTAGATGCTGCCNANAAGGGTGTGTTTTANCCAGATTNAA

TGCACGTGGCATCTGAGAAAGCTCATAATGATGTTGTTGAAGTAGTGGTGAAACATGAAG
CAAAGGTTAATGCTCTGGATAATCTTGGTCAGACTTCTCTACACAGAGCTGCATNTTGTG
GNCATCTACAAACCTGCCGCCTACTCTGAGCTATGGGTGTGATCCTAACATTATATCCC
TTCAGGGCTTTACTGCTTTACAGATGGGAAATGAAAATGTACAGCAACTCCTCCAAGAGG
GTATCTCATTAGGTAATTCAGAGGCAGACAGACAATTGCTGGAAGCTGCAAAGGCTGGAG
ATGTCGAAACTGTAAAAAACTGTGTACTGTTCAGAGTGTCAACTGCAGAGACATTGAAG
GGCGTCAGTCTACACCACTTCATTTGTCAGCTGGGTATAACAGAGTGTCCGTGGTGAAT
ATCTGCTACAGCATGGAGCTGATGTGCATGCTAAAGATAAAGGAGGCCCTTGTTACCTTTGC
ACAAATGCATGTTCTTATGGACATTATGAAGTTGCAGAACTTCTTGTAAACATGGAGCAG
TAGTTAATGTAGCTGATTTATGGAATTTACACCTTTACATGAAGCAGCAGCAAAAGGAA
AATATGAAATTTGCAAACTTCTGCTCCAGCATGGTGCAGACCCTACCAAAAAAACAGGG
ATGGAAATACTCCTTTGGATCTTGTTAAAGATGGAGATACANATATTCAAGATCTGCTTA
GGGAGATGCANNTTTNCTAGATGCTGCCNANAAGGGTGTGTTTTANCCAGATTNAA

>cip6clp5F2

TCATATCTGCTTAGGGGAGATGCAGCTTT
GCTAGATGCTGCCAAGAAGGGTGTGTTAGCCAGAGCGAAGAAGTTGTCTTCTCCTGATAA
TGTAATTTGCCGCGATACCCAAGGCAGACATTCAACACCTTTACATTTAGCAGCTGGTTA
TAATAATTTAGAAGTTGCAGAGTATTTGTTACAACACGGAGCTGATGTGAATGCCAAGA
CAAAGGAGGACTTATTCCTTTACATAATGCAGCATCTTACGGGCATGTAGATGTAGCAGC
TCTACTAATAAAGTATAATGCATGTGTCAATGCCACGGACAAATGGGCTTTACACCTTT
GCACGAAGCAGCCCCAAAAGGGACGAACACAGCTTTGTGCTTTGTTGCTAGCCCATGGAGC
TGACCCGACTCTTAAAAATCAGGAAGGACAAACACCTTTAGATTTAGTTTCAAGCGGATGA
TGTCAGCGCTCTTCTGACAGTAGCCATGCCCCCATCTGCTCTGCCCTCTTGTACAAGC
CTCAAGTGCTCAATGGGTGTGAGAAGCCCAGGAGCCACTGCAGATGCTCTCTCTTCAGGT
CCATCTAGCCCATCAAGCCTTTCTGCANCCAGCAGTCTTGACAACCTATTCTGGGAGTTT

>cip6c2p5-F3

GGATGGAAATACTCCTTTGGATCTTGTTAAAGATG
GAGATACAGATATTCAAGATCTGCTTAGGGGAGATGCAGCTTTGCTAGATGCTGCCAAGA
AGGGTTGTTTAGCCAGAGTGAAGAAGTTGTCTTCTCCTGATAATGTAAATTGCCGCGATA
CCAAGGCAGACATTCAACACCTTTACATTTAGCAGCTGGTTATAATAATTTAGAAGTTG
CAGAGTATTTGTTACAACACGGAGCTGATGTGAATGCCAAGACAAAGGAGGACTTATTC
CTTTACATAATGCAGCATCTTACGGGCATGTAGATGTAGCAGCTCTACTAATAAAGTATA



Exhibit B
09/843,159

6/15/1999

w/ Tank northam
blob
↳ This slide is for Cassen

Chk1 two-hybrid screening

Bait: Chk1

is a protein kinase required for cell cycle arrest in response to DNA damage

Hit: a novel protein homology to ATP-dependent RNA helicase
belongs to the DEAD-box RNA helicase family

The fission yeast *cdc28(+)* encodes a member of the DEAD-box family of putative RNA helicases involved in pre-mRNA splicing and cell cycle progression

a new gene encoding a putative DEAD box helicase have been isolated to suppress uncontrolled mitosis by overexpression *cdc25* in fission yeast
(Chk1 and 14-3-3 proteins also show up in this screening)

It is interesting to characterize the interaction of Chk1 and the novel RNA helicase and its role in cell cycle control

Potential targets for further pursuing

p21 hit:	Tankyrase homolog
Traf4 hit:	Cdk liked kinase
hRad9 hit:	PP5
PNCA hits:	a novel helicase a human homolog of SNM1 a novel endo/exo-ribonuclease
Chk1 hit:	an ATP-dependent RNA helicase homolog

Target validation:

- full length cloning
- examine the RNA expression in tumor verse normal tissues
- peptide binding library screening in YTH---->functional assay
- generate dominant-negative mutant

p21 hit: a Tankyrase homolog

Tankyrase (a poly(ADP-ribose) polymerase at human telomeres)

- a protein with homology to ankyrin and to the catalytic domain of ADP-ribose polymerase (PARP)
- is localized to human telomeres
- binds to the telomeric protein TRF1 (telomeric repeat binding factor-1)
- is a positive regulator of telomere length maintenance

SEP 08 2004

Project No. _____

Book No. _____

Exhibit #C 09/843,169
TITLE Smart HB for #2 (CZPS)

From Page

7/9/99 (5)

see pg.

SS Syn

HB (RT)

HB (RT)

polymer HB (144)

0.5 HB (14)

0.5 HB (14)

Smart Oligo II (90404295)

HB

1

1

primer

HBDS

1

HB (RT)

1

HB

2.5

2.5

70°C 3' ice

5

2.5

5x 1'

0.1M DTT

dNTP mix

RT

2

1

1

1

10

4°C 15 min

+50 Tricine-EDTA buffer, 72°C 7' ice
(10 min)

#2 (CZPS)

upm HB

RT

RT

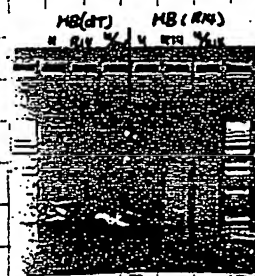
PCR

upm RT upm RT

HB 3

HB 3

Cap 30



HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

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HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

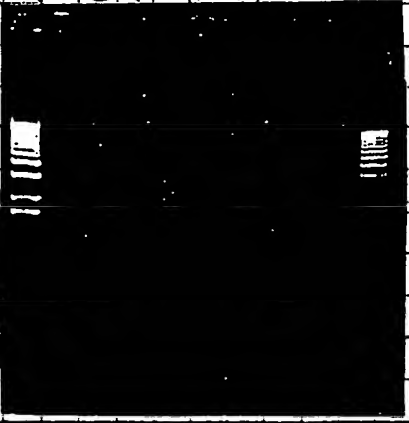
7/9/99 PCR (20)

primer: upm RT N/RT

HB (RT) 1P (HB/RT) 0.5

HB (RT) 1P (HB/RT) 10

Cap 25



HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

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HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

HB (RT) HB (RT)

Witnessed & Understood by me,

JA

Date

8/2/99

Invented by

S

Recorded by

S

Date

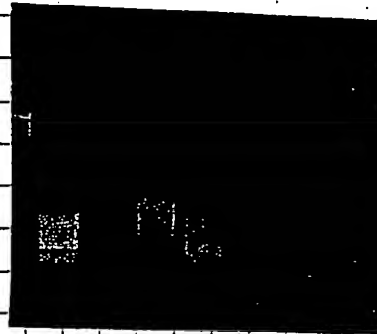
7/9/99

To Page No. _____

TITLE _____

From Page No. _____

Reheat 10 but use N/A/RH
 PCR primer N/A/RH N/A/RH
 templates: N/A/RH 2.1
 N/A/RH 2.2
 Cap30. 5'0 X



7/13/02 #2-CapA1 & #2-CapA2

PCR insert screening primer, N/A/RH

CAPS #2-CapA1

#2-CapA2



7/19/02 screening more

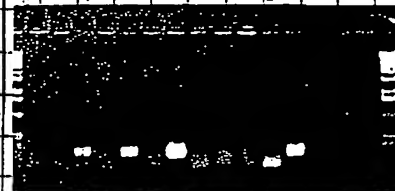
N/A/RH → 2-CapA1



2-CapA1



F13/RH check



2-CapA1



7/14/02

mini plasmid prep

#2-CapA2: #2-CapA1
3 7 10 11 12

#2-CapA2-3 (N/A/RH)

-10
-12

#2-CapA1-3

-11

300 ng each

Result

no sequence

7/14/02

no sequence

isoform 1

isoform 3

7/12

9

#1, PCR check N/A/RH

#2-CapA1-3 7 10 11 12
#2-CapA1-3 7 10 11 12
223, 224, 225

7/12

To Page No. 137

Witnessed & Understood by me,

JA

Date

8/27/99

Invented by

Sg

Recorded by

Sg

Date

7/13/99

From Page No. 115

7/1/99 5'-end cloning.

from library

Template

① HB/plb

② H. leuk/plb

③ 42ap mix

④ HB/psport

primer

FAL/R14

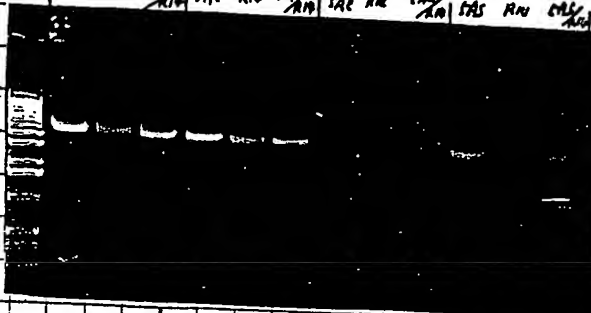
FAS/R14

FAS/R14

Gap30 (2'40'')

HB/plb H. Leuk/plb 42ap mix HB/psport

CAL R14 CAL R14 CAL R14 CAL R14 CAL R14 CAL R14



7/3/99

2P

F8/R11 F8/R11

#2-D1

#2-D2

#2-D3

#2-D4

Cap3

GP

GP

GP

GP

#2-D1 (F8/R11)

#2-D2 (F8/R11)

#2-D3 (F8/R11)

#2-D4 (F8/R11)

#2-D1

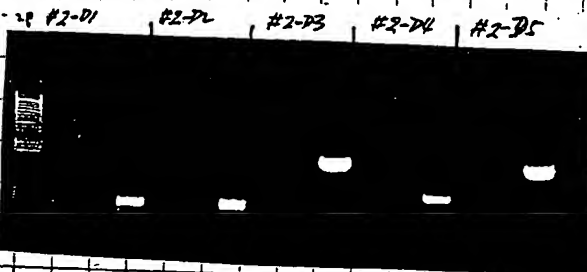
#2-D2

#2-D3

#2-D4

Insert screen

T/A cloning



7/11/99

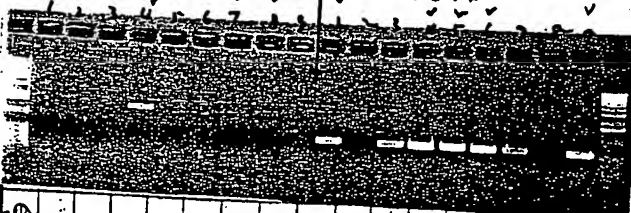
PCR insert screening primer F8/R11

PCR insert screening primer F8/R11

#2-D3

F8/R11

#2-D4



GP

GP

GP

GP

GP

#2-E1 (F8/R11)

#2-E2 (F8/R11)

#2-E3 (F8/R11)

#2-E4 (F8/R11)

#2-E5 (F8/R11)

#2-E1

#2-E2

#2-E3

#2-E4

#2-E5

To sequence

T/A cloning

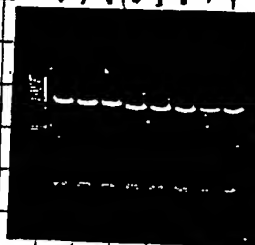
Check insert with

F8/R11

#2-D3

#2-D4

1 2 3 4 5 6 7 8 9



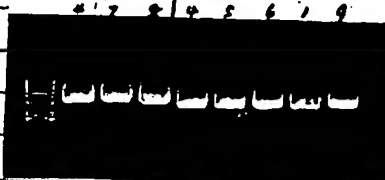
7/1/99

Mini prep

In on gel

Euler

Core = 300



Witnessed & Understood by me,

JH

Date

8/2/99

Invented by

Sg

Recorded by

Sg

Date

7/13/99

To Page No. _____

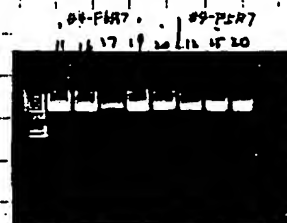
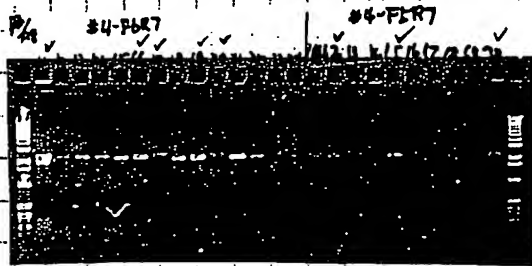
TITLE _____

PC-140 #4.

From Page No. 121

7/12/99

per insert screening again. Check has the amount clones are not enough.
 primer use F5/R8



#4-F6R7-11

-9

-20

#4-F5R7-15

7/13
 to sequence

7/15

Clones per insert screening



7/16

7/17/99

insert check result: all of them have band

To Page No. _____

Witnessed & Understood by me,

JH

Date

8/1/99

Invented by

S1

Recorded by

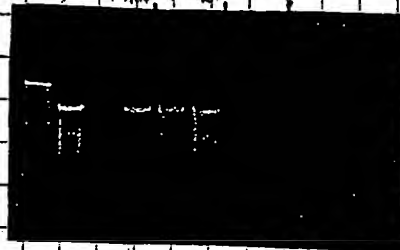
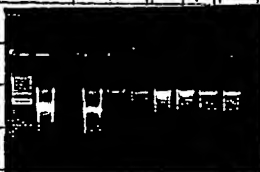
S2

Date

7/13/99

From Page No. *100**7/1/99 (2) Compare pH of PCR Buffer -**API RIL API RIL*

template H₂O (Marathon) 300 ng, 1 in 25 PCR
 $+ 0.5, 1.0 \text{ M HCl} + 0.5, 1.0 \text{ M HCl}$
 $+ 1.5, 1.5$
 $+ 1.5, 1.5$

*Cap30**nauseous**HCl**0**0.5**0.5**0.5**API RIL API RIL API RIL**X**Try New buffer & API.**API RIL API RIL**API RIL API RIL API RIL New Buff. 100 ng**X*

To Page No. _____

Witnessed & Understood by me,

JH

Date

8/2/99

Invented by

GD

Recorded by

GD

Date

7/15/99

7/14/90 (7/14) (7/14) (#2-5-1) (page bti) (change) (sequence) AN RN

0 { T+B X 6/25, p111 } Back kit X { #2-54-1 (44) }
 { H. leuk/pl V (R16, R11) } clonable kit V { -3 }
 { } { -4 }

1 { HB(R) V 6/30, p115-7 }
 { T+B V R14 }
 { H. Mela X }
 { H. Liver/pl V }
 { #2-C1-6 (113) }
 { (HB) -7 }
 { -12 }
 { -14 }
 { #2-C2-1 (113) }
 { (HB) -5 }
 { #2-C3-11 (113) }
 { (HB) -17 }
 { -18 }

2 { HB/pl V 7/2, p126-7 } X HB to send 9/10 mini & clones
 { H. leuk/pl V R14 } 15/26 → but distinct p11 F12/R11 class X
 { 4 Zap 21X } → no to sequencing
 { H. B/ps } → give p11 8p to F12
 { } X to min clone p11 { #2-D3 (H. leuk) }
 { } { #2-D4 (H. leuk) }
 { } { #2-D5 (H. leuk) }

3 { #2-54-1 X 7/1, p123, 128 } Normal Body
 { HB } RN { difference p11 but }
 { } { C. Nucleus }
 { } X p11 8p adaptor pattern

4 clonable Marathon Body 2/14, 7/6, p119
 { H. Fetal Brain X }
 { H. Fetal Liver X }
 { H. Leukocyte X }

5 { HB plasmid T V }
 { HB, V RN X }
 { #2-CapA1-3 (122) V isoform 1 }
 { -11 (122) V isoform 3 }
 { #2-CapA2-3 (122) }
 { -10 }
 { -12 (122) V no seq }
 { (HB) F12/R11 check }
 { #2-CapA1-29 (122) V }
 { -33 (122) V }
 { -34 (122) V }
 { #2-CapA2-26 (122) V }
 { -29 (122) V }

Result: got 2 isoform from Smart RACE. & got isoform from Library method.
 But Marathon did work.
 7/32 finish it.

TITLE

CZPS. #2

Project No. _____

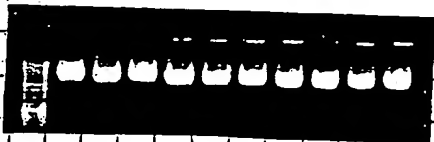
Book No. _____

137

From Page No. ¹²⁵

M/M prep 2x each

1 conc = 200 ng/pl



- F13/R11 insert check again

#2-CapA1-29

-33

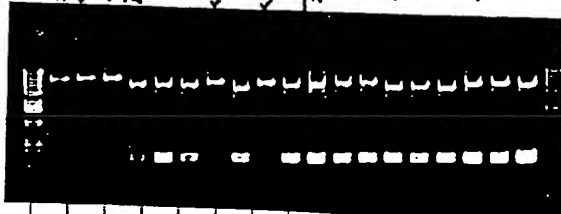
-34

to sequence 7/20 (3)

2-CapA2-26

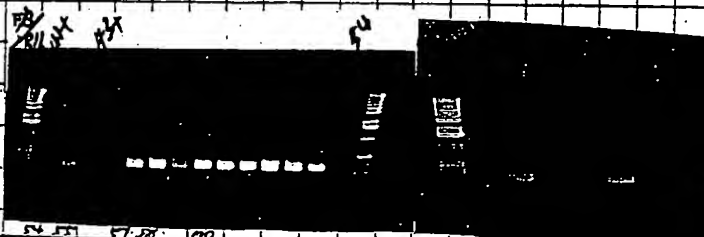
-29

2-94-11
 CZPS
 2-CapA1-29
 -33
 -34
 2-CapA2-11
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 -100



7/21 (3) pick 20 clones from #2-CapA1

PCR insert screen N/R11 & F13/R11



N/R11 PCR

41 43



Pathogen is primary

#2-CapA1-10

(N/R11)

#2-CapA1-60

CZPS #2-CapA1-60 to sequence (7/21)

mini

(Seq-PI35)

To Page No. _____

Witnessed & Understood by me,

JH

Date

8/17/99

Invented by

SY

Recorded by

SY

Date

7/21/99



RIGEL

4938

Exhibit D 09/843,149

FLEHR, HOBACH, TEST
ALBRITTON & HERBERT

1999 JUL 22 AM 9.02

RECEIVED

July 20, 1999

RIGEL, INC.

VIA FEDERAL EXPRESS

Ms. Robin Silva
Flehr, Hobach, Test, Albritton, & Herbert
4 Embarcadero Center, Suite 3400
San Francisco, California 94111-4187

Per RMS - OPEN
AS ONLY

Re: Provisional Patent Applications.

Dear Ms. Silva,

Per Brian Cunningham's request, enclosed with this letter are eight packages of information generated by Dr. Ying Luo in preparation for provisional patent application filings. Each package pertains to a different genetic sequence that Rigel believes may be commercially useful. Each package contains relevant scientific materials, journal references and abstracts of proposed gene functions.

Please file a provisional patent application for each document.

If you have any questions, please call me at 650-624-1106.

Respectfully yours,

Nicole A. Verona
Rigel Pharmaceuticals, Inc.

Exhibit E 09/845,141

FLEHR, HOBACH, TEST
ALBRITTON & HERBERT

1999 JUL 23 AM 10:04

RECEIVED

July 22, 1999

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RIGEL, INC.

VIA FEDERAL EXPRESS

Ms. Robin Silva
Flehr, Hobach, Test, Albritton, & Herbert
4 Embarcadero Center, Suite 3400
San Francisco, California 94111-4187

ORIGINAL Diskette in
P-68287

Re: Provisional Patent Applications.

Dear Ms. Silva,

It was a pleasure to meet you today. I'm sorry that I did not see you leave; I had intended to give you these diskettes before the end of our meeting.

On these diskettes are the documents that we reviewed earlier. The new document that Ying gave to me today will be ready on Monday.

If you have any questions, please call me at 650-624-1106.

Respectfully yours,

Nicole Verona

Nicole A. Verona
Rigel Pharmaceuticals, Inc.

Exhibit # F 09/843,149

DOCKETING/BILLING SYSTEM FILE INFORMATION
(Patent/Design Patent)

Date: July 26, 1999

File No.: A-68292

Client: Rigel Pharmaceuticals Access Code: 4931

Client

Attorney: DJB/RMS/DAV

Ref. No.:

New ☒

Update ☐

Close ☐

Parent ☐

Div. ☐

CPA ☐

CIP ☐

Subject Description

Title: TANKYRASEH, A Cell Cycle Protein

Inventors: Ying Luo

Serial No.:

Filing Date:

Patent No.:

Issue Date:

Assignee:

Related Files:

If Foreign file, please provide corresponding U.S. Serial Number
or Patent Registration Number.

Misc. (Include any action items and due dates here!):

Submitted by: Gail Clark

Date: July 26, 1999

cc: Accounting

Docketing - Foreign

Docketing - US

2x hixt AG 09/843, 149

From: Nicole Verona <NVerona@rigel.com>
To: "'dvance@flehr-iplaw.com'" <dvance@sfpo.fhtah.fleh...
Date: 8/30/99 4:01pm
Subject: FW: FW: info

Dear Dolly,

I forwarded your questions to Ying Luo and this is the response I received from him. I hope this helps. Also, I've got copies of the TNIK manuscript figures that you need. Would you like me to fax them to you?

Nicole

-----Original Message-----

From: Ying Luo [mailto:yluo@rigel.com]
Sent: Sunday, August 29, 1999 2:44 PM
To: Nicole Verona
Subject: Re: FW: info

PAN is from PCNA screening. tankyraseH is from CIP screening. CIP is also called p21. R0101 has an entry in GenBank with full length sequence with a name called KIAA0101. No functional annotation about R0101. PP5 was cloned and published before. The novelty is we can link PP5 to RAD9, a cell cycle checkpoint control protein. You should have all figures of TNIK manuscript already. TNIK nucleotide sequences are attached. PAN nucleotide sequence is already in Genbank.

Ying

At 03:21 PM 8/26/99 -0700, you wrote:

>Hi Ying!

>

>Here are some of the questions I need to discuss with you.

>

>Nicole

>

>-----Original Message-----

>From: Dolly Vance [mailto:dvance@flehr-iplaw.com]
>Sent: Friday, August 20, 1999 1:42 PM
>To: nverona@rigel.com
>Subject: info

>

>

>Dear Nicole,

>Hope you're well. Here's a complete list of what I am missing from the initial 9 disclosures.

>

>1) The names of binding partners (if any actual) for CAH and tankyraseH.

>2) The nucleic acid and amino acid sequences for PAN and TNIK (actually, all figures that go with the manuscript for TNIK).

>3) Please confirm that R0101 and PP5 are NOT novel, and that all others are novel.

>
>Thanks. Dolly

>P.S. I understand your hours are reduced. Any chance you can give me a

>time frame for providing the above information? Thanks again, Dolly

>

RIGEL

FLEHR, HOBACH, TEST,
ALBRITTON & HERBERT

1999 OCT -1 AM 10:05

RECEIVED

Exhibit H 09/843 149

RIGEL, INC.

September 30, 1999

Ms. Dolly Vance
Flehr, Hohbach, Test, Albritton and Herbert LLP
4 Embarcadero Center, Suite 3400
San Francisco, California 94111-4187

Dear Dolly,

Enclosed are documents pertaining to the cell-cycle patent applications that you requested.

The documents include:

1. TankyraseH abstracts involving TRF, P21, and PARP
2. TankyraseH nucleotide sequence alignment report
3. TankyraseH amino acid sequence alignment report
4. R0101 figures with corrected CDK 2, 3, and 4 labels
5. Mkinase nucleotide and amino acid sequences with its kinase domain and nuclear localization sequence (NLS) highlighted

Additional information will be sent to you next week.

Please call or email me if you have any questions.

Sincerely,

Nicole Verona

Nicole Verona